SEQUENCE LISTING

<110> Jegla, Timothy James
Wickenden, Alan
Liu, Yi
ICAgen, Inc.

<120> BK Beta Subunits of Slo Family Potassium Channels

<130> 018512-002030US

<140> US 09/914,053
<141> 2001-08-21

<150> US 60/121,224
<151> 1999-02-23

<150> US 60/163,367
<151> 1999-11-03

<150> WO PCT/US00/04441
<151> 2000-02-22

<160> 19

<170> PatentIn Ver. 2.1

<210> 1
<211> 257
<212> PRT
<213> Homo sapiens

<220>
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<400> 1

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  1               5                  10                  15

Asp Gly Asp Pro Leu Asp Val His Lys Arg Leu Pro Ser Ser Thr Gly
             20                  25                  30

Glu Asp Arg Ala Val Met Leu Gly Phe Ala Met Met Gly Phe Ser Val
         35                  40                  45

Leu Met Phe Phe Leu Leu Gly Thr Thr Ile Leu Lys Pro Phe Met Leu
     50                  55                  60

Ser Ile Gln Arg Glu Glu Ser Thr Cys Thr Ala Ile His Thr Asp Ile
 65                  70                  75                  80

Met Asp Asp Trp Leu Asp Cys Ala Phe Thr Cys Gly Val His Cys His
                 85                  90                  95

Gly Gln Gly Lys Tyr Pro Cys Leu Gln Val Phe Val Asn Leu Ser His
            100                 105                 110

Pro Gly Gln Lys Ala Leu Leu His Tyr Asn Glu Glu Ala Val Gln Ile
        115                 120                 125
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Asn Pro Lys Cys Phe Tyr Thr Pro Lys Cys His Gln Asp Arg Asn Asp
    130                 135                 140

Leu Leu Asn Ser Ala Leu Asp Ile Lys Glu Phe Phe Asp His Lys Asn
145                 150                 155                 160

Gly Thr Pro Phe Ser Cys Phe Tyr Ser Pro Ala Ser Gln Ser Glu Asp
                165                 170                 175

Val Ile Leu Ile Lys Lys Tyr Asp Gln Met Ala Ile Phe His Cys Leu
            180                 185                 190

Phe Trp Pro Ser Leu Thr Leu Leu Gly Gly Ala Leu Ile Val Gly Met
        195                 200                 205

Val Arg Leu Thr Gln His Leu Ser Leu Leu Cys Glu Lys Tyr Ser Thr
    210                 215                 220

Val Val Arg Asp Glu Val Gly Gly Lys Val Pro Tyr Ile Glu Gln His
225                 230                 235                 240

Gln Phe Lys Leu Cys Ile Met Arg Arg Ser Lys Gly Arg Ala Glu Lys
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<210> 2
<211> 774
<212> DNA
<213> Homo sapiens

<220>
<223> BK beta 2

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tttgccatga tgggcttctc agtcctaatg ttcttcttgc tcggaacaac cattctaaag 180
ccttttatgc tcagcattca gagagaagaa tcgacctgca ctgccatcca cacagatatc 240
atggacgact ggctggactg tgccttcacc tgtggtgtgc actgccacgg tcaggggaag 300
tacccgtgtc ttcaggtgtt tgtgaacctc agccatccag gtcagaaagc tctcctacat 360
tataatgaag aggctgtcca gataaatccc aagtgctttt acacacctaa gtgccaccaa 420
gatagaaatg atttgctcaa cagtgctctg gacataaaag aattcttcga tcacaaaaat 480
ggaacccccct tttcatgctt ctacagtcca gccagccaat ctgaagatgt cattcttata 540
aaaaagtatg accaaatggc tatcttccac tgtttatttt ggccttcact gactctgcta 600
ggtggtgccc tgattgttgg catggtgaga ttaacacaac acctgtcctt actgtgtgaa 660
aaatatagca ctgtagtcag agatgaggta ggtggaaaag taccttatat agaacagcat 720
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<210> 3
<211> 210
<212> PRT
<213> Homo sapiens

<220>
<223> BK beta 3

<400> 3
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Ser Ile Arg Leu Gly Leu Phe Leu Ile Ile Ser Gly Val Val Ser Leu
20 25 30

Phe Ile Phe Gly Phe Cys Trp Leu Ser Pro Ala Leu Gln Asp Leu Gln
35 40 45

Ala Thr Glu Ala Asn Cys Thr Val Leu Ser Val Gln Gln Ile Gly Glu
50 55 60

Val Phe Glu Cys Thr Phe Thr Cys Gly Ala Asp Cys Arg Gly Thr Ser
65 70 75 80

Gln Tyr Pro Cys Val Gln Val Tyr Val Asn Asn Ser Glu Ser Asn Ser
85 90 95

Arg Ala Leu Leu His Ser Asp Glu His Gln Leu Leu Thr Asn Pro Lys
100 105 110

Cys Ser Tyr Ile Pro Pro Cys Lys Arg Glu Asn Gln Lys Asn Leu Glu
115 120 125

Ser Val Met Asn Trp Gln Gln Tyr Trp Lys Asp Glu Ile Gly Ser Gln
130 135 140

Pro Phe Thr Cys Tyr Phe Asn Gln His Gln Arg Pro Asp Asp Val Leu
145 150 155 160

Leu His Arg Thr His Asp Glu Ile Val Leu Leu His Cys Phe Leu Trp
165 170 175

Pro Leu Val Thr Phe Val Val Gly Val Leu Ile Val Val Leu Thr Ile
180 185 190

Cys Ala Lys Ser Leu Ala Val Lys Ala Glu Ala Met Lys Lys Arg Lys
195 200 205

Phe Ser
210

<210> 4
<211> 633
<212> DNA
<213> Homo sapiens

<220>
<223> BK beta 3

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agtcccgcgc tgcaggatct gcaagccacg gaggccaatt gcacggtgct gtcggtgcag 180
cagatcggcg aggtgttcga gtgcaccttc acctgtggcg ccgactgcag gggcacctcg 240
cagtacccct gcgtccaggt ctacgtgaac aactctgagt ccaactctag ggcgctgctg 300
cacagcgacg agcaccagct cctgaccaac cccaagtgct cctatatccc tccctgtaag 360
agagaaaatc agaagaattt ggaaagtgtc atgaattggc aacagtactg gaaagatgag 420
attggttccc agccatttac ttgctatttt aatcaacatc aaagaccaga tgatgtgctt 480

ctgcatcgca ctcatgatga gattgtcctc ctgcattgct tcctctggcc cctggtgaca 540
tttgtggtgg gcgttctcat tgtggtcctg accatctgtg ccaagagctt ggcggtcaag 600
gcggaagcca tgaagaagcg caagttctct taa 633

<210> 5
<211> 235
<212> PRT
<213> Homo sapiens

<220>
<223> BK beta 4

<400> 5

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Glu	Lys	Arg	Asn	Ile	Tyr	Gln	Lys	Ile	Arg	Asp	His	Asp	Leu	Leu	Asp
			20					25					30		
Lys	Arg	Lys	Thr	Val	Thr	Ala	Leu	Lys	Ala	Gly	Glu	Asp	Arg	Ala	Ile
		35					40					45			
Leu	Leu	Gly	Leu	Ala	Met	Met	Val	Cys	Ser	Ile	Met	Met	Tyr	Phe	Leu
	50					55					60				
Leu	Gly	Ile	Thr	Leu	Leu	Arg	Ser	Tyr	Met	Gln	Ser	Val	Trp	Thr	Glu
65					70					75					80
Glu	Ser	Gln	Cys	Thr	Leu	Leu	Asn	Ala	Ser	Ile	Thr	Glu	Thr	Phe	Asn
				85					90					95	
Cys	Ser	Phe	Ser	Cys	Gly	Pro	Asp	Cys	Trp	Lys	Leu	Ser	Gln	Tyr	Pro
			100					105					110		
Cys	Leu	Gln	Val	Tyr	Val	Asn	Leu	Thr	Ser	Ser	Gly	Glu	Lys	Leu	Leu
		115					120					125			
Leu	Tyr	His	Thr	Glu	Glu	Thr	Ile	Lys	Ile	Asn	Gln	Lys	Cys	Ser	Tyr
	130					135					140				
Ile	Pro	Lys	Cys	Gly	Lys	Asn	Phe	Glu	Glu	Ser	Met	Ser	Leu	Val	Asn
145					150					155					160
Val	Val	Met	Glu	Asn	Phe	Arg	Lys	Tyr	Gln	His	Phe	Ser	Cys	Tyr	Ser
				165					170					175	
Asp	Pro	Glu	Gly	Asn	Gln	Lys	Ser	Val	Ile	Leu	Thr	Lys	Leu	Tyr	Ser
			180					185					190		
Ser	Asn	Val	Leu	Phe	His	Ser	Leu	Phe	Trp	Pro	Thr	Cys	Met	Met	Ala
		195					200					205			
Gly	Gly	Val	Ala	Ile	Val	Ala	Met	Val	Lys	Leu	Thr	Gln	Tyr	Leu	Ser
	210					215					220				
Leu	Leu	Cys	Glu	Arg	Ile	Gln	Arg	Ile	Asn	Arg					
225					230					235					

<210> 6
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<212> DNA
<213> Homo sapiens

<220>
<223> BK beta 4

<400> 6
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aaggcaggag aggaccgagc tattctcctg ggactggcta tgatggtgtg ctccatcatg 180
atgtattttc tgctgggaat cacactcctg cgctcataca tgcagagcgt gtggaccgaa 240
gagtctcaat gcaccttgct gaatgcgtcc atcacggaaa catttaaytg ctccttcagc 300
tgtggtccag actgctggaa actttctcag taccctgcc tccaggtgta cgttaacctg 360
acttcttccg gggaaaagct cctcctctac cacacagaag agacaataaa aatcaatcag 420
aagtgctcct atatacctaa atgtggaaaa aattttgaag aatccatgtc cctggtgaat 480
gttgtcatgg aaaacttcag gaagtatcaa cacttctcct gctattctga cccagaagga 540
aaccagaaga gtgttatcct aacmaaactc tacagttcca acgtgctgtt ccattcactc 600
ttctggccaa cctgtatgat ggctgggggt gtggcaattg ttgccatggt gaaacttaca 660
cagtacctct ccctactatg tgagaggatc cacggatcaa tagataa 707

<210> 7
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to
amplify BK beta 2

<400> 7
atgacagcct ttcctgcctc agggaag 27

<210> 8
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to
amplify BK beta 2

<400> 8
agatttctct gctcttcctt tgctcctcc 29

<210> 9
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to
amplify BK beta 2

<400> 9
ggctggctgg actgtagaag catg 24

<210> 10
<211> 27
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 2

<400> 10
gaggctgtcc agataaatcc caagtgc 27

<210> 11
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 2

<400> 11
ggactgagaa gcccatcatg gcaaacc 27

<210> 12
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 3

<400> 12
atggcgaagc tccgggtggc ttac 24

<210> 13
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 3

<400> 13
ttaagagaac ttgcgcttct tcatgg 26

<210> 14
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 3

<400> 14
gatgtgcttc tgcatcgcac tcatg 25

<210> 15
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 2

<400> 15
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<210> 16
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 2

<400> 16
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<210> 17
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 2

<400> 17
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<210> 18
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer to amplify BK beta 4

<400> 18
gtcccagtag aatagctcgg tcctc 25

<210> 19
<211> 191
<212> PRT
<213> Homo sapiens

<220>
<223> BK beta 1

<400> 19

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Leu Cys Leu Gly Val Thr Met Val Val Cys Ala Val Ile Thr Tyr Tyr
             20                  25                  30

Ile Leu Val Thr Thr Val Leu Pro Leu Tyr Gln Lys Ser Val Trp Thr
         35                  40                  45

Gln Glu Ser Lys Cys His Leu Ile Glu Thr Asn Ile Arg Asp Gln Glu
     50                  55                  60

Glu Leu Lys Gly Lys Lys Val Pro Gln Tyr Pro Cys Leu Trp Val Asn
 65                  70                  75                  80

Val Ser Ala Ala Gly Arg Trp Ala Val Leu Tyr His Thr Glu Asp Thr
                 85                  90                  95

Arg Asp Gln Asn Gln Gln Cys Ser Tyr Ile Pro Gly Ser Val Asp Asn
            100                 105                 110

Tyr Gln Thr Ala Arg Ala Asp Val Glu Lys Val Arg Ala Lys Phe Gln
        115                 120                 125

Glu Gln Gln Val Phe Tyr Cys Phe Ser Ala Pro Arg Gly Asn Glu Thr
    130                 135                 140

Ser Val Leu Phe Gln Arg Leu Tyr Gly Pro Gln Ala Leu Leu Phe Ser
145                 150                 155                 160

Leu Phe Trp Pro Thr Phe Leu Leu Thr Gly Gly Leu Leu Ile Ile Ala
                165                 170                 175

Met Val Lys Ser Asn Gln Tyr Leu Ser Ile Leu Ala Ala Gln Lys
            180                 185                 190
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